



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,588	12/12/2003	Frederick J. Bennett	EKOS.8CPIC1	1726
20995 7590 11/10/2009 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614				
EXAMINER				
ROY, BAISAKHI				
ART UNIT		PAPER NUMBER		
3737				
NOTIFICATION DATE		DELIVERY MODE		
11/10/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary

Application No.

10/735,588

Applicant(s)

BENNETT ET AL.

Examiner

BAISAKHI ROY

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been fully considered but they are not persuasive. With respect to the medium, according to the Merriam Webster Dictionary, a medium is a substance regarded as the means of transmission of a force or effect. With respect to Crowley, the sheath structure forms a sonolucent guide and is formed of a thin sonolucent material to provide guidance for the drive shaft and transducer material and therefore served as a means of transmission of ultrasound energy. The claims are not directed to a specific type of medium such as a "binding medium" serving a specific type of function distinct from the function of the sheaths as disclosed by Crowley. The medium as claimed, under broadest reasonable interpretation, is equivalent to the sheath structure. With respect to the two different sheaths, Crowley teaches the use of two different sheaths, where the first sheath portion surrounds the distal end of the catheter shaft and the second sheath extends a substantial distance from the first sheath portion and spaced a greater distance from the drive shaft than the radial spacing of the first sheath portion from the shaft segment. The first sheath portion corresponds with the position of the transducer being transparent to acoustic energy transmitted and received by the transducer (col. 7 lines 30-col. 8 line 14). The substantially transparent portion of the catheter sheath has a thinner wall than the proximal portion and therefore the first sheath or first

medium is more flexible and thinner than the second sheath or second medium. Therefore the two sheaths are located along different ends of the catheter where the first sheath is closer to the drive shaft than the second sheath. Examiner suggests amending claims to further define the binding medium structurally and functionally in order to overcome art of record. The previous rejection is therefore maintained and repeated below.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 9-14, 21-37, and 44-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Crowley (5715825) .

Crowley discloses an acoustic imaging catheter device that has a flexible ultrasonic probe with an ultrasound transducer, where the catheter body is made up of flexible material. The catheter includes a first and second sheath or a first and second medium where the where the first sheath portion spaced less distance from the drive shaft that is thinner than the second sheath portion spaced greater distance from the drive shaft and occupying the volume between the transducer sheath and the external surface of the catheter body. Crowley further teaches that the first sheath is a

continuous, flexible resinous sheath and is substantially transparent to acoustic energy transmitted and received by the transducer (col. 7 lines 30-49). Crowley teaches that the catheter may be formed having sonolucent and nonsonolucent regions made of thicker material (col. 17 lines 53-57). The catheter system includes a guidewire which extends longitudinally through the catheter body (col. 3 lines 15-17). Therefore it is inherent that the first sheath in Crowley corresponds to the first medium which is more flexible than the second sheath or second medium which is thicker walled and necessarily harder than the first sheath (col. 8 lines 29-35).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 38, 39, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crowley in view of Nassi et al. (4947852).

Crowley teaches said catheter assembly to include thinner and thicker segments but does not teach of a specific hardness value. In the same field of endeavor Nassi et al. teaches a catheter system with a Shore hardness of 40D-55D (col. 8 lines 6-9). It would have therefore been obvious to one of ordinary skill in the art to use a catheter assembly with sheaths of specific hardness to promote durability and withstand strain.

5. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crowley in view of Kawabuchi et al. (4699150).

Crowley teaches said catheter assembly to include thinner and thicker segments but does not teach of a specific hardness value. In the same field of endeavor Nassi et al. teaches a catheter system with a Shore hardness of 60-100D (col. 4 line 10). It would have therefore been obvious to one of ordinary skill in the art to use a catheter assembly with sheaths of specific hardness to promote durability and withstand strain.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAISAKHI ROY whose telephone number is (571)272-7139. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art
Unit 3737

BR
/B. R./
Examiner, Art Unit 3737